

Work Order ID 83028

83028

Page 1

April-12-12 12:58:10 PM

Item ID: D206-642-241

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Replacement Skidtube

Stop *NS2*

Start Date: 12/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/12 Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D2650	Rev F
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100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-241

CHG005

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00

110

Skidtubes

0.00

Skidtubes

Skidtubes

Memo

1-Debur Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D2650

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch
A/R Aluminum Rod m120164

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg 2650 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D2650

7-Open holes for Aft end cap as per Dwg D2650 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt 8167.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

SAD 12-04-23

SAD 12-05-08

W/O:		WORK ORDER CHANGES					
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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D2650

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D2650

15-C'sink GHW rivet holes as per Dwg D2650

SAD 12-05-08

SAD 12-05-15

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

Sizlo16

(X)

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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Skidtubes	0.00							
130									
Skidtubes	Memo	0.00							
Skidtubes	1-Open crossbolt holes to Ø0.3125"								
	2-Drill pilot holes using DT8028-3, then open to Ø0.297" as per Dwg D2650. Open Aft cap hole #6.								
	3-Deburr tube and blow out chips from inside the tube								
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140									
HandFinish	Memo	0.00							
Hand Finishing									
150	QC7-Inspect Chemical Conversion Coat	0.00							
150									
QC	Memo	0.00							
Quality Control									

1 0 CF 125-16

7/6 125-16

① SAD 12-05-16

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Reference:

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Skidtubes	0.00							
160									
Skidtubes	Memo	0.00							
Skidtubes	1-Open holes to finished size as per Dwg D2650, D2650-3 Drilling Detail (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D2650(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								
170	QC6- Inspect dimensions to drawing	0.00							
170									
QC	Memo	0.00							
Quality Control									

>

CF 12-5-16

DP 12-5-17

W/O:		WORK ORDER CHANGES					
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Reference:

Approvals: Process Plan: Date: Tooling:

Date:

Run Start ***NR1***

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Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180

0.00

180

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Locate, install and rivet doublers as per Dwg D2650. Micro-shave rivets as required

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 12-5-12 Time: 14:00
Finish Date: 12-05-22 Time: 10:00

Pick:

Qty Part Number Description Batch

A/RSikaflex-291 m121221Sikaflex expire date: 13-1-4

190

QC5- Inspect part completeness to step on W/O

0.00

190

QC

Memo

0.00

Quality Control

CF 12-5-17

CF 12-5-17

1 0 86120522

W/O:		WORK ORDER CHANGES					
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Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
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Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

200

0.00

200

Skidtubes

Skidtubes

Memo

0.00

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch
A/RAluminum Rod M/20164

3-Grind welds flush as per Dwg D2650.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D2650. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONE

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D2650. Deburr

BE 12/05/22

CF 12-5-22

BE 12/05/22

DP 12-5-23

W/O:		WORK ORDER CHANGES					
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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

210

HandFinish

Hand Finishing

HandFinishing

Memo

Install D2680-041 Nut Plate as per Dwg D2650

0.00

0.00

220

220

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

230

230

QC

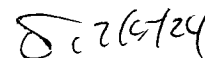
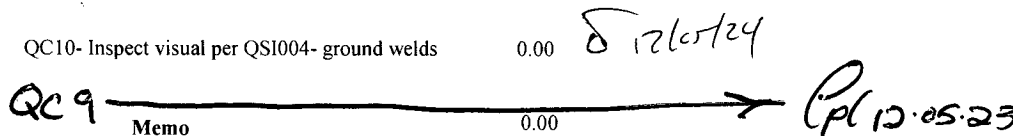
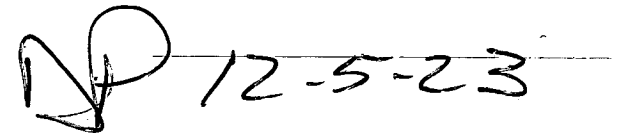
Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00



W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240 Pressure Wash per QSI005 4.3

0.00

240

HandFinish

Memo

0.00

Hand Finishing

Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

1 7/5 12-5-29

250 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

250

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

8:45
320°F
9:15

12/05/30

260 QC3- Inspect Part Finish

0.00

260

QC

Memo

0.00

Quality Control

12/05/30

W121134

W/O:		WORK ORDER CHANGES					
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270

0.00

270

HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1- Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/R Sikaflex-291 AA121409

Sikaflex expire date: 13/03

2-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D2650 (D2650-3 detail). Clean excess adhesive.

3-Install MS27039-4-06 Screw as per DEO 9153.

4 -Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 AA121409

Sikaflex expire date: 13/03

5 -Wing Walk as per Dwg D2650-3 and QSI 005 4.4

A/R Batch: AA121505

Batch: AA121505

(x) p all also 13c

300

QC5- Inspect part completeness to step on W/O

0.00

300

QC

Memo

0.00

Quality Control

Sikaflex

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
310		0.00							
310	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-664-241								
	Location: _____								
	PPP Rev: <u>PPP 83989</u>								
320	QC21- Final Inspection - Work Order Release	0.00							
320									
QC	Memo	0.00							
Quality Control									

[Handwritten signature]

CR 12/7/13

CME 12-07-12

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: 04.12.02 Revised procedural steps KJ/JLM IPP RevP: revise and update route/bom DD 10.01.06 verified by: ECIPP rev Q 10.02.19 per PAR 09-043 EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620		Manufactured	No			110	Each	24.0000	1	1			
D2620									**				
Skidtube, 206 Skidtube													

SAD 12-04-23

Location	Loc Qty	Loc Code
LG	24	
77999	1	
79543	2	
79544	1	
81365	1	
81366	1	
82028	12	
82517	6	

①

D3286-1
D3286-1
Doubler

Manufactured No

110 Each 111.0000 2

**

SAD 12-05-08

Location	Loc Qty	Loc Code
LG002	223	
74872	6	
78014	21	
79556	78	
ST046	-112	
76772	6	

②

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2647

Manufactured No

110 Each

16.0000 1 1

D2647

Cap

**

BE 12/09/23
B 79563

Location

Loc Qty

Loc Code

LG002

16

75482

16

D2654-3

Manufactured No

180 Each

9.0000 1 1

D2654-3

Web

**

CF 12-5-17

Location

Loc Qty

Loc Code

LG

9

78988

1

82106

8

CR3212-4-04

Purchased No

180 Each

5,412.000 52

CR3212-4-04

Cherry Rivet

**

CF 12-5-17

Location

Loc Qty

Loc Code

ST331

154

116471

74

117816

3

118686

1

118840

16

119017

60

st510

5258

119075

5258

April-12-12 12:58:14 PM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 3

Work Order ID: 83028

83028

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

200

Each

1,108.000

18

18

D2649

Cross Bolt Spacer

**

BE 12/05/22

Location

Loc Qty

Loc Code

LG

769

77574

2

79502

65

79503

399

79564

296

79565

7

LG001

339

65317

1

68224

2

68507

11

71355

2

72704

2

72841

11

73390

8

73857

21

73858

53

73859

4

73860

4

78020

6

78583

2

79566

212

18

D3286-3

Manufactured No

200

Each

62.0000

2

2

D3286-3

Spacer

**

BE 12/05/22

Location

Loc Qty

Loc Code

LG001

62

74117

1

79557

61

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 4

Work Order ID: 83028

Parent Item: D206-642-241

Parent Item Name: Replacement Skidtube

83028

D206-642-241

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041

Manufactured No

210

Each

118.0000

1

1

D2680-041

Nut Plate

**

DP 12-5-23

Location

Loc Qty

Loc Code

ST013

116

78016

116

ST019

2

76790

2

CR3212-4-03

Purchased

No

210

Each

1,382.000

2

2

CR3212-4-03

Cherry Rivet

**

DP 12-5-23

Location

Loc Qty

Loc Code

FP002

394

114859

394

ST331

988

110139

2

119017

986

CCR264SS3-3

Purchased

No

210

Each

497.0000

2

2

CCR264SS3-3

Cherry Rivet

**

DP 12-5-23

Location

Loc Qty

Loc Code

ST331

497

113973

2

117849

109

119017

386

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 12:58:14 PM

Page 5

Work Order ID: 83028

83028

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

270

Each

80.0000

1

1

D2646

Aft Cap

**

12/05/30

Location

Loc Qty

Loc Code

FP002

80

B81974

XL

62678

5

68280

5

70945

1

71070

2

73294

1

73825

2

78018

22

79500

1

79562

41

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 12:58:14 PM

Page 6

Work Order ID: 83028

83028

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-1

Manufactured No

270

Each

773.0000

18

18

D2651-1

Plug

**

yl 12/05/30

Location

Loc Qty

Loc Code

FP

200

FP001

601

57869

1

66445

10

69018

2

70827

2

70839

8

71037

8

77559

30

78584

18

79234

222

FP-A

-28

77559

1

78124

5

81809

66

81954

200

82573

200

x18

AN960JD416

NAS1149D0463J

Purchased

No

270

Each

10.0000

1

1

AN960JD416

Washer

**

11121255 (x1) yl 12/05/30

Location

Loc Qty

Loc Code

ST351

10

116289

10

April-12-12 12:58:14 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 7

Work Order ID: 83028

83028

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-3

Manufactured No

270 Each

1,552.000 18

18

D2651-3

O-Ring

**

12/05/30

Location

Loc Qty

Loc Code

FP001

16

61962

12

73828

4

FP-A

1536

78126

1536

MS27039-1-08

Purchased No

270 Each

1,647.000 46

46

MS27039-1-08

Screw

**

12/05/30

Location

Loc Qty

Loc Code

ST291

1647

117423

81

119075

1

120308

804

121011

261

121243

500

ALS4-1032-130

Purchased No

270 Each

6,003.000 44

44

ALS4-1032-130

Insert

**

12/05/30

Location

Loc Qty

Loc Code

ST280

205

119084

116

120671

89

ST281

2798

120807

798

120837

2000

ST282

3000

121269

3000

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Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 8

Work Order ID: 83028

Parent Item: D206-642-241

Parent Item Name: Replacement Skidtube

83028

D206-642-241

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

270

Each

153.0000

1

1

MS27039-4-06

Screw

**

u 12/05/30

Location

Loc Qty

Loc Code

ST292

153

119075

153

xl

AN960JD10L

NAS1149D0332J

Purchased

No

270

Each

0.0000

46

46

AN960JD10L

Washer

11/17/61**

(x46) 12/06/32

D3537-1

Manufactured

No

270

Each

42.0000

4

4

D3537-1

Wearpad

**

u 12/05/30

Location

Loc Qty

Loc Code

FG

10

1381360

xl

79833

10

FP002

32

69817

5

80337

4

81361

23

D3537-3

Manufactured

No

270

Each

33.0000

1

1

D3537-3

Wearpad

**

xl

Location

Loc Qty

Loc Code

FP002

33

78836

24

80338

9

1381363

xl

April-12-12 12:58:14 PM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 9

Work Order ID: 83028

83028

Parent Item: D206-642-241

D206-642-241

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-13

Manufactured No

270

Each

28.0000

1

1

D3535-13

Wearshoe

**

HL 12/05/30

Location

Loc Qty

Loc Code

FP001

28

78962

3

79850

1

80327

12

81353

12

VI

D3536-13

Manufactured No

270

Each

35.0000

1

1

D3536-13

Gasket

**

HL 12/05/30

Location

Loc Qty

Loc Code

FP002

35

78964

11

81344

24

VI

D3535-21

Manufactured No

270

Each

21.0000

1

1

D3535-21

Wearshoe

**

HL 12/05/30

Location

Loc Qty

Loc Code

FP001

6

80329

6

FP002

15

78987

15

VI

D3536-21

Manufactured No

270

Each

19.0000

1

1

D3536-21

Gasket

**

HL 12/05/30

Location

Loc Qty

Loc Code

FP002

19

78966

19

B83433

VI

April-12-12 12:58:14 PM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-12-12 12:58:14 PM

Page 10

Work Order ID: 83028

Parent Item: D206-642-241

Parent Item Name: Replacement Skidtube

83028

D206-642-241

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-33

Manufactured No

270

Each

18.0000

1

1

D3535-33

Wearshoe

**

M 12/05/30

Location

Loc Qty

Loc Code

FP001

18

1382751

41

70462

3

78984

15

D3536-33

Manufactured No

270

Each

24.0000

1

1

D3536-33

Gasket

**

M 12/05/30

Location

Loc Qty

Loc Code

FP002

24

70465

11

81341

13

41

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 83028 HLT

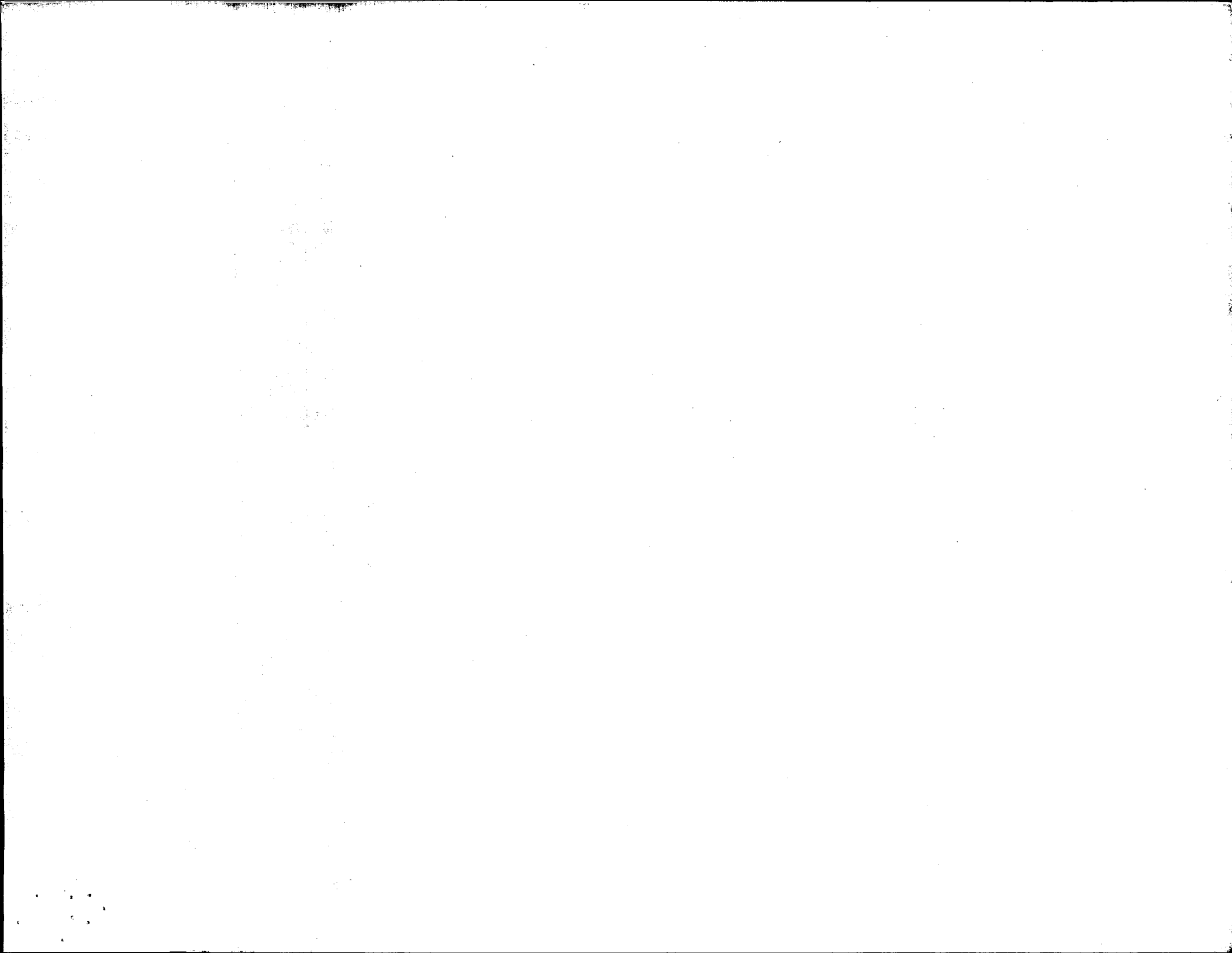
12/04/12

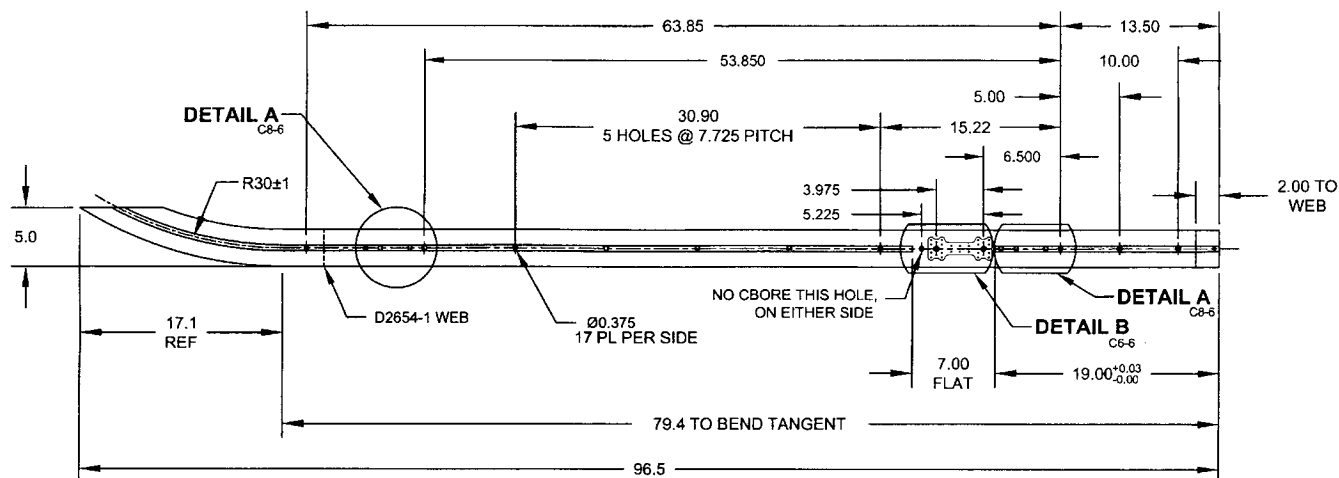
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08-07-23/12

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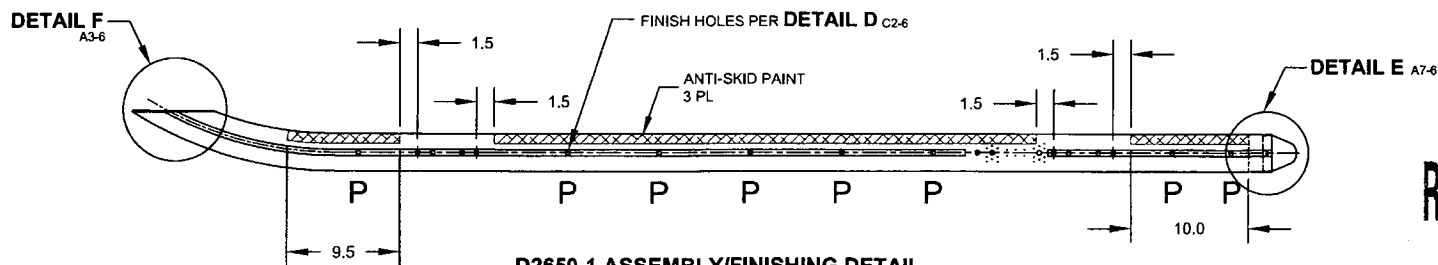
- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	REMOVE CBORE, CHG DRILL. ADD CHAMFER	CP	06.03.30
D	REDRAW; INCCRP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 1 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	<small>COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	



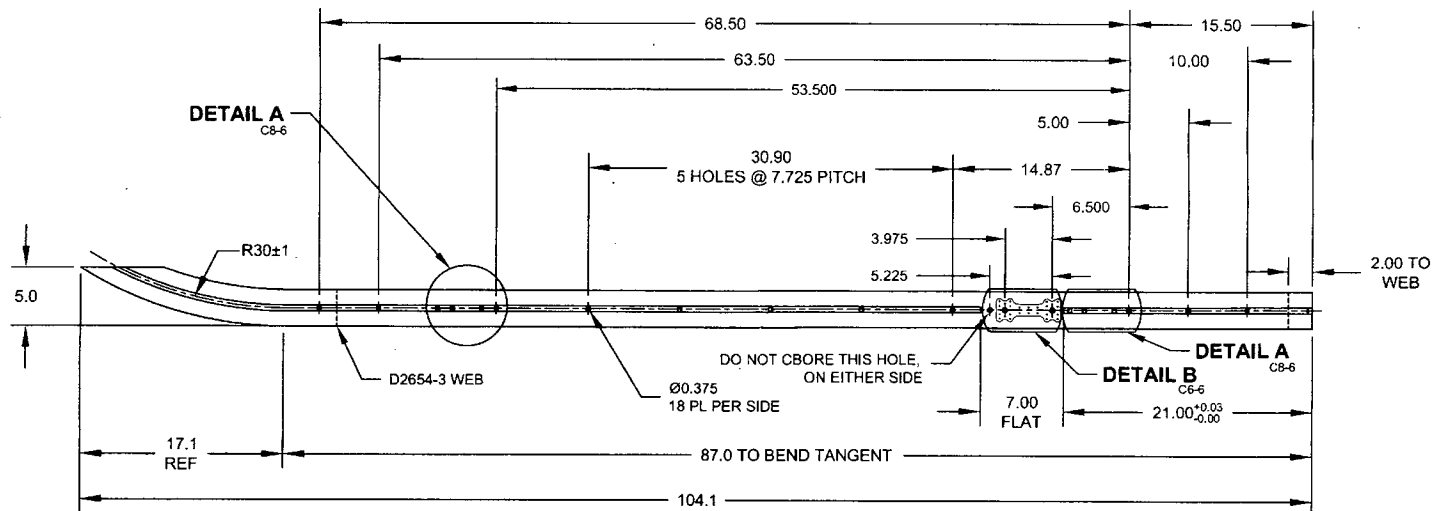


D2650-1 BENDING/DRILLING DETAIL

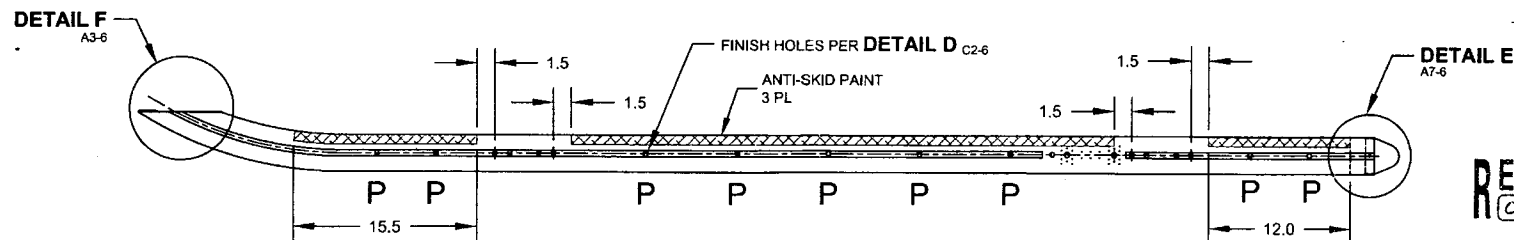


D2650-1 ASSEMBLY/FINISHING DETAIL




DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 2 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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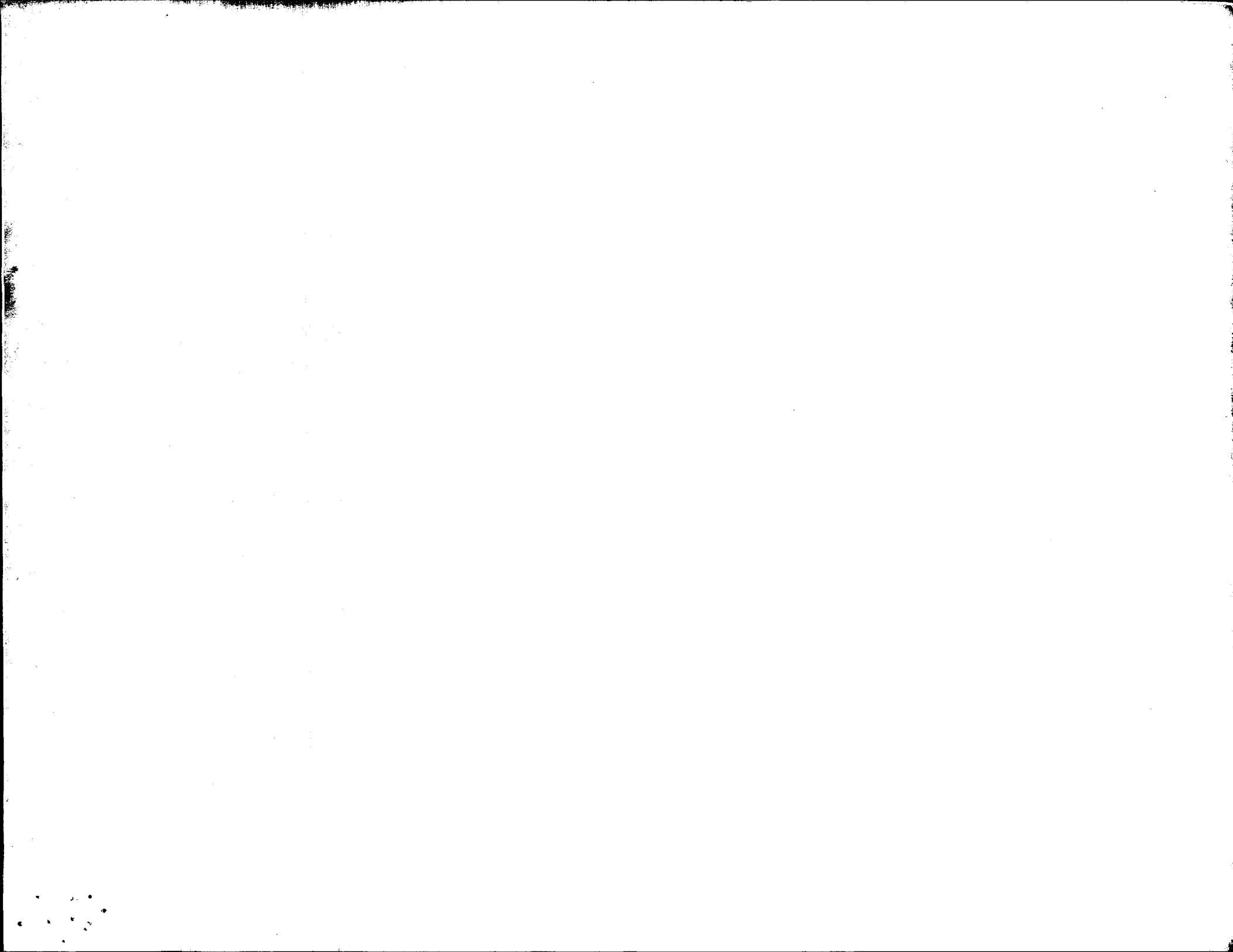


D2650-3 BENDING/DRILLING DETAIL



D2650-3 ASSEMBLY/FINISHING DETAIL

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 3 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS NOT TO BE REPRODUCED OR DISCLOSED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. IT IS NOT TO BE USED FOR ANY PURPOSES OF CONSTRUCTION TIES TO ANY OTHER PERSONS OR ORGANIZATION.	



8 7 6 5 4 3 2 1

83028

D

106.00
99.75
93.50
82.250
43.63
35.900
28.18
17.950
10.23
2.00 TO WEB

13.50

DETAIL A
C8-6

R30±1

5.0

D2654-7
WEB

Ø0.625
THIS LOCATION ONLY
BOTH SIDES

30.90
5 HOLES @ 7.725 PITCH

Ø0.375
23 PL PER SIDE

2.500

2.500

17.1
REF

121.5 TO BEND TANGENT

138.6

5.000

10.000

DETAIL A
C8-6

C

D2650-7 BENDING/DRILL DETAIL

B

RELEASED
08 07 22 117

DETAIL F
A3-6

1.5

1.5

FINISH HOLES PER DETAIL D C2-6

ANTI-SKID PAINT
3 PL

1.5

1.5

10.0

P P P P P P P P P P

23.3

DETAIL E
A7-6

A

D2650-7 ASSEMBLY/FINISHING DETAIL

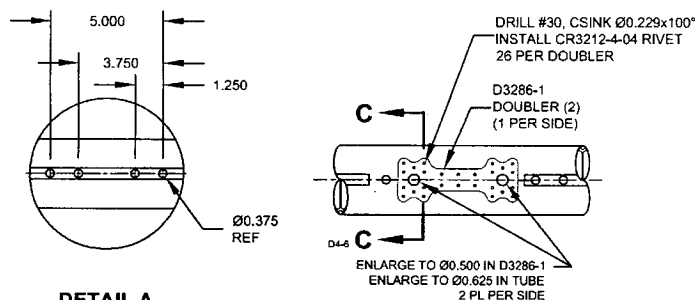
DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 5 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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8 7 6 5 4 3 2 1

RELEASED
06 07 22

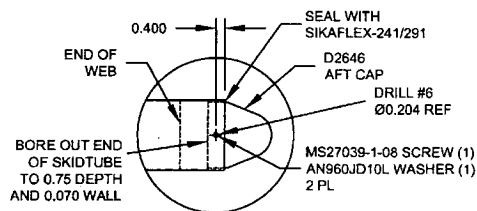
D2650-7 ASSEMBLY/FINISHING DETAIL

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.	<i>[Signature]</i>	D2650	SHEET 5 OF 6
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DETAIL A
SCALE 2X
C2-2
D7-2
C2-3
D7-3
C2-4
D7-4
C2-5
D6-5

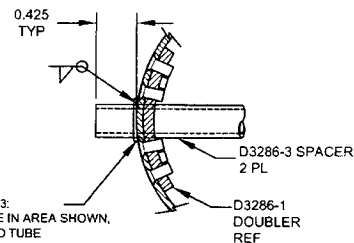
DETAIL B
SCALE 2X
C3-2
C3-3



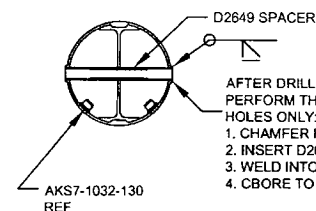
DETAIL E
SCALE 2X
B2-2
B2-3
B1-4
B1-5

ORIENTATION OF
D2680-041

SECTION C-C C7-6
SCALE NONE

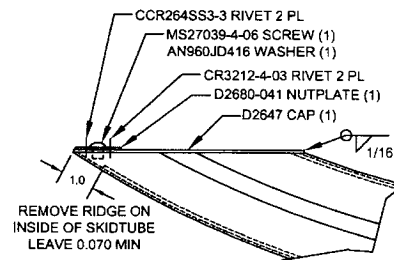


- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.030x45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE.



DETAIL D
FOR Ø0.375 HOLES ONLY
SCALE 3X
B4-2
B4-3
B4-4
B4-5

- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP



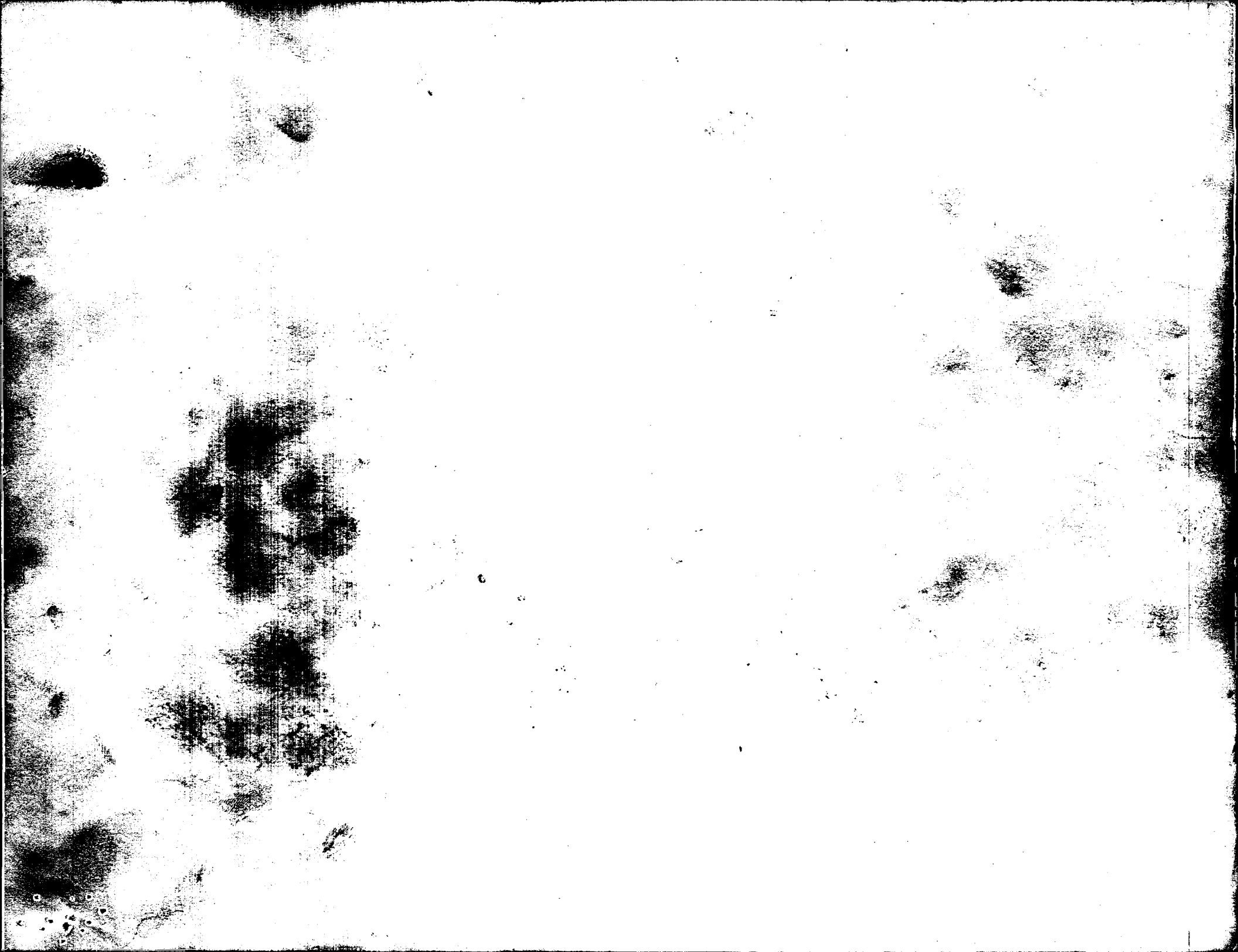
DETAIL F
SCALE NONE
B8-2
B8-3
B8-4
B8-5

- DETAIL F NOTES:**
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D2647 (TRIM AS NECESSARY)
 4. WELD D2647 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

RELEASED
08-09-22-18

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NO. 295

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 83028
Part number: A206-642-241
Description: Skid tube
Welding Process: Tig[☒] Mig[☐]
Base material: Alum.
Current: AC[☒] DC[☐]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[☐]
Penetration: pass[☒] fail[☐]

UNACCEPTABLE

Cracks: pass[☒] fail[☐]
Undercut: pass[☒] fail[☐]
Pin holes: pass[☒] fail[☐]
Overlap (cold lap): pass[☒] fail[☐]
Porosity (surface): pass[☒] fail[☐]
Coloration: pass[☒] fail[☐]

Qualifier [Signature] Date of Test Coupon 12.05.23
Welder Barclay Elliott Date of Test Coupon 12.05.23

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

